

School Nurse Checklist for Diabetes Care at School

Dates:

- _____ 1. School Nurse is notified that student with diabetes will be attending school.
- _____ 2. Arrange a meeting/home visit with parents/legal guardian and student and complete Individualized School Healthcare Plan (ISHP).
 - a. Discuss current health status and management of diabetes -care at home.
 - b. Observe parent/student performing healthcare procedures.
 - c. Discuss parent/student expectations of diabetes care while at school.
 - d. Discuss level of care needed in school.
 - e. Discuss role of the personnel involved in providing the health care at school and provide and review copies of California Education Code Title 5, Section 49423.5 and California Code of Regulations, Title 5, Section 3051.12.
 - f. Obtain parent/guardian written consent to include the following:
 1. To administer healthcare services for school attendance and school related activities
 2. To allow the school nurse to communicate with the primary healthcare provider.
 - g. Collaborate with parent to develop details of the Individualized School Healthcare Plan (ISHP), potential accommodations and all supplies needed during the school schedule, all school related activities and a 3 day disaster plan.
- _____ 3. Obtain physician's specific prescribed written authorization for healthcare services and parent's written consent on the same form.
- _____ 4. Assemble Standard Procedures as identified in the IHCP and review with site administrator. The site administrator designates staff and back-up staff to be trained. This may occur before an IEP and/or 504 meeting is convened. Training can begin when parent written consent and physician's written authorizations have been received. Designated staff should not perform standard procedures needed until completion of training and competency is achieved. Interim arrangements may need to be made for student school attendance.

If a 504 Plan is requested or an IEP is determined to be necessary, follow step #5. If not, proceed to step #6.

- _____ 5.
 - a. When a 504 Student Study Team or an Individualized Education Plan Team meeting convenes, the team reviews the ISHP and accepts and/or makes modifications/changes as agreed. A copy of the final ISHP is attached to the 504Plan or IEP.
 - b. The assessment component of the 504 Plan or IEP must include a statement indicating the attachment of the ISHP.
 - c. The Designated Instructional Services (DIS) component of the 504 Plan or IEP must include School Nursing Services for managing the ISHP and training and supervising designated staff.

_____ 6. Plan, Organize, and Implement designated staff training of **Diabetes Basics Training Program**, healthcare procedures and implementation of the ISHP:

a. **Plan:**

- 1) Review CPR dates of designated staff. Arrange for training if needed.
- 2) Using the **Diabetes Basics Training Program**, standard procedures and the ISHP, develop a training program for designated staff. Include an agenda and time frame for components and sign-in form for documentation of training dates.
- 3) Plan an Inservice for teachers, lunchroom and playground personnel, principal, transportation, coaches, bus drivers, etc. offering a condensed version of the training program emphasizing emergency diabetes care.

b. **Organize:**

- 1) Duplicate necessary training materials and assemble in orderly fashion for all participants in the training.
- 2) Develop and organize a schedule for training

c. **Implement:**

- 1) Train all designated staff to a level of 100% competency in knowledge and skills in performing standard healthcare procedures and student emergency response procedures.
- 2) Supervise and monitor staff performance of all procedures and student outcomes. Electronic availability of the school nurse to all trained staff is essential for adequate supervision and support (pager and cell phones for immediate response for problem solving and directions in emergencies).
- 3) Manage ISHP: With parent input, monitor and review outcomes of plan and initiate necessary changes not requiring physician authorization. Maintain current records and authorizations for all changes requiring physician authorization (refer to Parent Consent and Physician's Authorization for Diabetes Management at School and School Sponsored Events form). Inform and/or train designated staff of all changes in procedures and log event and dates.
- 4) Arrange a classroom presentation on diabetes if requested.

Parent Consent and Physician Authorization
For Management of Diabetes at School and School Sponsored Events
 Individualized School Healthcare Plan (ISHP) and Standard Procedures Will Provide Details for Implementation

Pupil	DOB	School	Grade
Physician's Written Authorization: Please initial and check all boxes that apply			
1. Blood Glucose Testing: <input type="checkbox"/> Before meals <input type="checkbox"/> As needed <input type="checkbox"/> By pupil <input type="checkbox"/> Needs assistance		If Insulin At School: Brand Name and Type: _____	
2. Routine Care of Hypoglycemia When Below 70: <input type="checkbox"/> Self treatment of mild lows <input type="checkbox"/> Assistance for all lows Notify physician when: _____		Dose Preparation By: <input type="checkbox"/> Pupil <input type="checkbox"/> Syringe and vial <input type="checkbox"/> Parent <input type="checkbox"/> Insulin pen <input type="checkbox"/> Parent designee <input type="checkbox"/> Insulin pump <input type="checkbox"/> Licensed nurse <input type="checkbox"/> Inhaler	
3. Emergency Care of Severe Hypoglycemia: <input type="checkbox"/> Glucose gel: <input type="checkbox"/> Conscious <input type="checkbox"/> Unconscious <input type="checkbox"/> Glucagon injection: <input type="checkbox"/> 0.5 mgm <input type="checkbox"/> 1 mgm Notify physician when: _____		# of SQ Insulin Units Determined By: <input type="checkbox"/> Pupil <input type="checkbox"/> Licensed nurse	
4. Care of Hyperglycemia: <input type="checkbox"/> 240 or above <input type="checkbox"/> 300 or above <input type="checkbox"/> Other: _____ <input type="checkbox"/> Check ketones if 300 or above as follows: <input type="checkbox"/> By pupil independently <input type="checkbox"/> Needs assistance		Written sliding scale as follows: Blood Glucose from _____ to _____ = _____ Units Blood Glucose from _____ to _____ = _____ Units Blood Glucose from _____ to _____ = _____ Units Blood Glucose from _____ to _____ = _____ Units	
5. Insulin at school: <input type="checkbox"/> Not at this time <input type="checkbox"/> Lunchtime dose: use sliding scale <input type="checkbox"/> Correction lunchtime dose: use sliding scale <input type="checkbox"/> Carb Counting: _____ # units per _____ gms Carbohydrate <input type="checkbox"/> Morning snack <input type="checkbox"/> Lunch <input type="checkbox"/> Afternoon snack		SQ Insulin Administered By: <input type="checkbox"/> Pupil <input type="checkbox"/> Parent <input type="checkbox"/> Parent designee <input type="checkbox"/> Licensed nurse <input type="checkbox"/> Pupil with staff verification of Insulin Pen or Pump #. (All parent designees are trained by the parent and are not employees of the school or district)	
Other Needs (Specify): _____			
Parent Consent for Management of Diabetes at School			
We(I), the undersigned, the parent(s)/guardian(s) of the above named pupil, request that the following specialized physical health care service for Management of Diabetes in school be administered to our (my) child in accordance with Education Code Section 49423.5 I will: <ol style="list-style-type: none"> 1. Provide the necessary supplies and equipment 2. Notify the school nurse if there is a change in pupil health status or attending physician 3. Notify the school nurse immediately and provide new consent for any changes in doctor's orders, I authorize the school nurse to communicate with the physician when necessary. I understand that I will be provided a copy of my child's completed Individual School Healthcare Plan. (ISHP)			
Parent/Guardian Signature _____		Date _____	
Physician Authorization For Diabetes Management In School			
My signature below provides authorization for the above written orders. I understand that all procedures will be implemented in accordance with Education Code Section 49423.5. I understand that specialized physical health care services may be performed by unlicensed designated school personnel under the training and supervision provided by the school nurse. This authorization is for a maximum of one year. If changes are indicated, I will provide new written authorization (may be faxed)			
<input type="checkbox"/> I have instructed _____ (Child's Name) in the proper way to use his/her medications. It is my professional opinion that _____ (Child's Name) should be allowed to carry and use that medication by him/herself. _____ Physician Initial			
<input type="checkbox"/> I request that the School Nurse provide me with a copy of the completed Individualized School Healthcare Plan (ISHP).			
Physician Name _____		Physician Signature _____	
Phone _____		Address _____	
City _____		Zip _____	

Reviewed by School Nurse (Signature) _____ **(Date)** _____

Reviewed by Principal (Signature) _____ **(Date)** _____

Individualized School Healthcare Plan (ISHP)

Pupil:			
Grade:	D.O.B	Educational Placement:	
School:			
District:			
School Nurse:		Pager #	Cell #
Parent/Guardian Consent Date:		Physician Authorization Date:	
Key Contacts			
Mother	Home #	Work #	Pager #
Father	Home #	Work #	Pager #
Guardian	Home #	Work #	Pager #
Home Address		City	Zip
Other Contact (Relationship):		Home #	Work #
Physician		Phone #	Fax #
Physician Address		City	Zip
Healthcare Service Needed at School	Management of Diabetes at School and School Sponsored Eventss:		
Purpose of an ISHP	<ol style="list-style-type: none"> 1. The purpose of an Individualized School Healthcare Plan (ISHP) is to provide safe management of healthcare needs and services for pupils at school and during school-related activities. 2. The school nurse, in collaboration with the student and the student's parent/guardian, healthcare providers, and school team, is responsible for: <ol style="list-style-type: none"> a) Development, implementation, and revisions of the ISHP. b) The training and supervision of all designated personnel who will provide healthcare according to the ISHP and standard procedures. 3. The ISHP may be attached as a document for a 504 Plan and/or IEP. 4. ISHP revisions must be directed to the school nurse prior to implementation. All physician changes must have a written physician authorization and written parent consent. Revisions, not requiring physician authorization, may be made with written parent consent. 5. ISHP review must occur annually and whenever necessary to ensure provision of safe care. 		

Individualized School Healthcare Plan
School Nurse Assessment (Confidential)
 Completed With Parent and Pupil

Pupil	DOB	School	Grade
Date:		Pupil's Height:	Pupil's Weight:
1. Vision – Test date	School Record Results:		
2. Hearing-Test date	School Record Results:		
3. Immunizations			
4. Diagnosis/ Current Status	Age at diagnosis was _____. The target range for maintaining blood sugar is ____mg/dl to ____ mg/dl. The most recent Hemoglobin A1 C level was ____mg/dl on (date)_____. (Hemoglobin A1 C is the lab value for blood glucose control during the previous 6 weeks to 3 months. Ranges are: 6 - 8 (good), 9 - 10 (fair), 11+ (poor))		
5. Current Health Status and Management of Healthcare at Home (include school attendance if appropriate)			
6. Other Health Problems			
7. Health Agencies/School DIS Service			
8. Other			
9. Healthcare Procedure Requests for School and Special Considerations			
1. Observation of Student - Physical Finding			
2. Observations of HealthCare Procedures Performed by Parent/Student			
3. Other			

Individualized School Healthcare Plan School
Nurse Assessment, Continued (Confidential)
 Completed With Parent and Pupil

Pupil	DOB	School	Grade
Analysis			
Determination of Level of Care Needed in School	<input type="checkbox"/> School nurse (responsible for training, monitoring, and supervising designated staff)		
	<input type="checkbox"/> Designated unlicensed school personnel..... <input type="checkbox"/> One:One		
	<input type="checkbox"/> Licensed personnel..... <input type="checkbox"/> One:One		
	Pupil: <input type="checkbox"/> Independent <input type="checkbox"/> Needs assistance <input type="checkbox"/> Needs supervision <input type="checkbox"/> Needs total care		
Information & Explanation of Ed Code 49423.5 & Regulations with Role Clarification and Question Clarification			
	Authorization Forms Reviewed and Given to Parent		
Discussion of Plan with Parent: Identify School Goals and Nursing Intervention			

Individualized School Healthcare Plan (ISHP)
For Management of Diabetes at School
 Completed With Parent and Pupil

Pupil	DOB	School	Grade
Diabetic Routines At School Per Parent Request/Consent	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> Daily Snacks: </div> <div style="width: 50%;"> Time(s) _____ Place specified _____ <input type="checkbox"/> Done independently <input type="checkbox"/> Needs reminder <input type="checkbox"/> Needs daily compliance verification </div> </div> <div style="margin-top: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <ul style="list-style-type: none"> • Extra Snacks: </div> <div style="width: 50%;"> <input type="checkbox"/> Before exercise <input type="checkbox"/> After exercise <input type="checkbox"/> 10 gms. CHO every 30 minutes during vigorous exercise <input type="checkbox"/> Needs daily compliance verification </div> </div> <div style="margin-top: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <ul style="list-style-type: none"> • Daily Blood Test: </div> <div style="width: 50%;"> Time(s) _____ Location for testing _____ <input type="checkbox"/> By pupil independently <input type="checkbox"/> Adult verifies results <input type="checkbox"/> Needs assistance (specify) _____ </div> </div> <div style="margin-top: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <ul style="list-style-type: none"> • Exercise: </div> <div style="width: 50%;"> <input type="checkbox"/> None if blood glucose test results are below _____ mg/dl </div> </div> <div style="margin-top: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <ul style="list-style-type: none"> • Lunch Eaten At (time) _____ </div> <div style="width: 50%;"> Regardless of schedule changes, field trips, disaster, etc. <input type="checkbox"/> Needs daily verification of meal eaten </div> </div> <div style="margin-top: 10px;"> <ul style="list-style-type: none"> • In Event of Field Trips, all diabetic supplies are taken and care is provided according to this ISHP (a copy is taken on trip) </div> </div> <div style="text-align: center; margin-top: 20px;"> <u>The School Nurse Must Be Notified Two Weeks Before The Field Trip To Plan For Qualified Personal To Provide Procedures</u> </div> <div style="margin-top: 10px;"> <ul style="list-style-type: none"> • In Event of Classroom/School Parties, food treats will be handled as follows: <div style="margin-left: 20px;"> <input type="checkbox"/> Pupil will eat the treat. <input type="checkbox"/> Replace with parent supplied alternative <input type="checkbox"/> Put in baggie and take home with teacher note. <input type="checkbox"/> Modify the treat as follows: </div> • In Event of Bus Transportation: <div style="margin-left: 20px;"> <input type="checkbox"/> Blood test given 10 to 20 minutes before boarding. If 70 or less, provide care per Procedure For Mild to Moderate Low Blood Glucose and call parent to provide transportation home. <input type="checkbox"/> Blood test not required. </div> • Scheduled After-School Activities: _____ </div> </div></div></div>		
Other	(Specify): _____		

Individualized School Healthcare Plan (ISHP)
For Management of Diabetes at School (Continued)
 Completed With Parent and Pupil

Pupil	DOB	School	Grade
Equipment and supplies	<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p><u>Provided By Parent</u></p> <p><u>Daily Snacks</u> (for AM/PM snack times) Specify: _____</p> <p><u>Extra Snacks</u> (for before, after, and/or during exercise) Specify: _____</p> <p><u>Blood Glucose Meter Kit</u> (Includes meter, testing strips, lancing device with lancet, cotton balls, spot Band-Aids)</p> <p>Brand/Model: _____</p> <p><u>Low Blood Glucose Supplies</u>, (5 day supply)</p> <p><input type="checkbox"/> Fast Acting Carbohydrate Drinks: (Apple juice and/or orange juice, sugared soda pop-NOT diet), at least 6 containers.</p> <p><input type="checkbox"/> Glucose Tablets, 1 package or more.</p> <p><input type="checkbox"/> Glucose Gel Products (Insta-Glucose, Monogel or Glutose/25--31 Gms.), 2 or more.</p> <p><input type="checkbox"/> Gel Cakemate (not frosting), (19 Gm., mini-purse size), 2 or more.</p> <p>Note: Not used in Emergency Procedure For Severe Low Blood Sugar.</p> <p><input type="checkbox"/> Prepackaged Snacks (such as crackers with cheese or peanut butter, nite bite, etc.), 5 - 6 servings or more.</p> <p><u>High Blood Glucose Supplies</u></p> <p><input type="checkbox"/> Ketone Test Strips/Bottle</p> <p><input type="checkbox"/> Urine cup</p> <p><input type="checkbox"/> Water bottle</p> <p>Note: Timing device may be wall clock or watch worn by pupil or personnel.</p> </div> <div style="width: 48%;"> <p><u>Provided By Parent (Continued)</u></p> <p><u>Insulin Supplies</u></p> <p><input type="checkbox"/> Insulin pen</p> <p><input type="checkbox"/> Pre-filled syringes (labeled per dose)</p> <p><input type="checkbox"/> Insulin and syringes</p> <p><input type="checkbox"/> Extra pump supplies such as:</p> <p style="margin-left: 20px;"><input type="checkbox"/> Vial of insulin, syringes</p> <p style="margin-left: 20px;"><input type="checkbox"/> Pump syringe</p> <p style="margin-left: 20px;"><input type="checkbox"/> Pump tubing/needle</p> <p style="margin-left: 20px;"><input type="checkbox"/> Batteries</p> <p style="margin-left: 20px;"><input type="checkbox"/> Tape</p> <p style="margin-left: 20px;"><input type="checkbox"/> Sof-Serter</p> <p>Insulin supplies stored: _____</p> <p><u>Emergency Supplies</u></p> <p><input type="checkbox"/> Glucagon kit stored: _____</p> <p><input type="checkbox"/> 3 day disaster food supply stored: _____</p> <p><u>3 Day Disaster Diabetes Supplies</u></p> <p><input type="checkbox"/> Vial of insulin; 6 syringes</p> <p><input type="checkbox"/> Insulin pen with cartridge and needles</p> <p><input type="checkbox"/> Blood glucose testing kit (testing strips lancing device with lancets)</p> <p><input type="checkbox"/> Glucose gel product and glucose tablets</p> <p><input type="checkbox"/> Glucagon kit</p> <p><input type="checkbox"/> Food supply (include daily meal plan) stored as follows: _____</p> <p><input type="checkbox"/> Ketone strips/plastic cup</p> <p>School will include a copy of the ISHP for Diabetes Management with the Disaster Supplies. Stored as follows: _____</p> <p><u>Other Supplies</u>, Specify: _____</p> </div> </div>		

**Individualized School Healthcare Plan (ISHP)
For Management of Diabetes at School (Continued)**

Completed With Parent and Pupil

Pump Skills Checklist

This form is to be completed by the school nurse with input from the parent/care provider. The school nurse must directly assess specific skills for competency if independent performance is desired. Document student competency on the ISHP. Competency must be accordance with standard procedures.

Pupil	DOB	School	Grade
Pump skill:		Requires Supervision	Independently Performs
1. Appropriately counts carbohydrates If supervision is required the parents are to provide calculations.			
2. Calculates appropriate correction dose based on physician's orders			
3. Calculates total dose based on physician's orders for carbohydrate consumption and correction dose. Refer to Physician Authorization Page			
4. Programs appropriate bolus If supervision is required then parents can program a bolus delay or school nurse must supervise.			
5. Adjusts temporary rate for exercise If supervision is required then a temporary basal rate is not recommended at school. Adjustment for exercise will be made by pre-set basal profile at home or with provision of extra carbohydrates as detailed in ISHP.			
6. Disconnects & reconnects tubing If supervision is required then tubing will NOT be disconnected at school.			
7. Inserts new infusion set If supervision required then parents are responsible for proper insertion.			
8. Uses Universal Precautions for site insertion			
9. Fills reservoir and primes tubing If supervision required then parents are responsible for filling and priming.			
10. Trouble shoots alarms appropriately Child to report any alarm to teacher /school staff.			
11. Appropriately identifies high & low blood glucose levels			

Completed With Parent and Pupil

[illegible]

Designated Staff for All Procedures

Completed Training Date

Copy of ISHP Given to

Completed Date of ISHP _____

Parent Signature_____

School Nurse Signature _____

Date Parent Received Copy _____

Date _____

Date_____

[illegible]

Diabetes

General Information

Diabetes is a disorder that occurs when the pancreas does not produce enough insulin. Insulin is required for cells to use energy obtained from sugar and starches. Most children require insulin injections daily, usually AM and PM. Managing diabetes requires a daily balance of insulin, food and exercise. This assists in achieving proper blood glucose levels for healthy living and prevention of diabetes complications.

Goals for Management of Diabetes at School

1. To provide for compliance with daily diabetic routines.
2. To train designated personnel to recognize the signs of Low Blood Glucose (Insulin Reaction/Hypoglycemia), recognize the signs of High Blood Glucose (Hyperglycemia), provide assistance for restoring appropriate glucose levels, and/or obtain emergency care.
3. To promote pupil self-help skills as appropriate.

Pupils with diabetes may experience the following conditions:

- A. **Insulin Reaction (Hypoglycemia)** is a condition of abnormally low blood glucose. This is caused by not eating enough food, extra exercise, skipping a meal, taking too much insulin, or illness (especially vomiting and diarrhea). Symptoms may be gradual or sudden and, if not treated, can result in loss of consciousness or convulsions.
- B. **Diabetic Acidosis (AKA Hyperglycemia)**: A condition when blood sugar is too high over an extended period of time. This is caused by not taking enough insulin for the amount of food eaten, not exercising enough, stress, or illness. Most common signs may be extreme thirst, frequent urination, dry skin, hunger, blurred vision, lethargy, drowsiness, loss of energy, nausea/vomiting, change in mood or personality, and/or fruity breath odor. Undiagnosed diabetics often seek initial medical care when signs of high blood sugar become apparent.
- C. **Ketoacidosis (Diabetic Coma)** is a potentially life threatening condition that may occur during periods of extreme low blood glucose or high blood glucose. At such times, the body may burn fat, as an alternate source of glucose, in an attempt to provide energy. Ketones are produced as a by-product of such fat metabolism. This is an inefficient way to produce energy and can cause side effects of lethargy, headache, nausea, vomiting, rapid breathing, and eventually Ketoacidosis.

Blood Glucose Testing

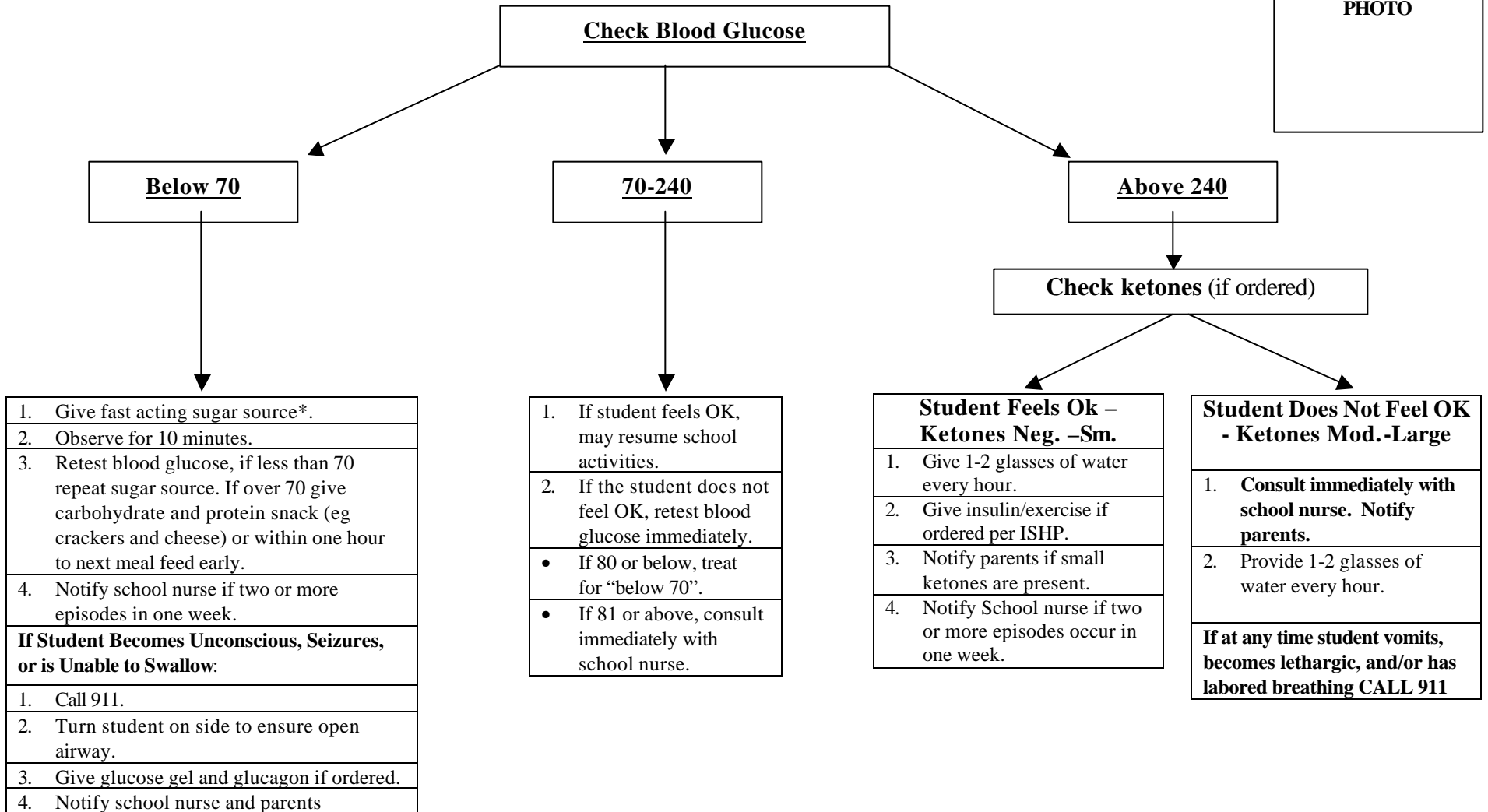
General Information	<ol style="list-style-type: none">1) To determine the level of blood glucose at designated testing times or when symptoms of hypo/hyperglycemia occur (refer to specific procedure).2) Regular monitoring of blood glucose levels contribute towards proper management of diabetes. This should be available to student in school whenever and wherever necessary3) Follow specific manufacturer's instructions for operating meter.4) Non-diabetic blood glucose levels range between 70-110 before a meal. Appropriate ranges for a diabetic vary depending on age and the ability to balance insulin, diet, and exercise.<ul style="list-style-type: none">• For students under 5 or 6 years of age most blood glucose levels should be between 100 and 200. Expect some readings below 100 and some above 200. If more than 25% of the readings are above 200 or below 100, the management plan may need to be adjusted.• For older and teenager students most blood glucose readings should be between 80 and 150. Expect some readings below 80 and some above 150. If more than 25% of the readings are below 80 or above 150 then the management plan may need to be adjusted5) Parent/care provider to supply necessary equipment for performing procedures at school.
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Standard Procedure for Blood Glucose Testing

Pupil	DOB	School	Grade
Equipment and Supplies	1. Alcohol prep pad 2. Finger lancing device (Lancet, Autolet, Penlet, etc) 3. Blood glucose testing meter such as Advantage, Elite One Touch etc.	4. Blood testing strips for specific electronic meter. Kleenex or cotton balls 5. Gloves 6. Log Book	
Essential Steps			Key Points & Precautions
1. Wash hands and area to be tested with soap and water. Put on gloves. Student's hands must be washed as well. This is sufficient for prepping the site, however, alcohol may be used for further prepping. (The site selected must be dry before pricking.)			Alcohol may cause toughening of the skin or burning sensation. If moisture (water or alcohol) remains on the skin it may alter test results.
2. Place glucose testing strip into electronic meter according to manufacturer's instructions.			
3. Prepare lancing device according to manufacturers instructions.			
4. If using finger for site use the finger tip sides. Hang the arm below the level of the heart for 30 seconds to increase blood flow, then gently squeeze the fingertip in a "milking" fashion to further increase the blood supply to the site.			The tops of the fingertips may be more sensitive. The sides of the fingers have less blood flow. Different sites can be used such as the forearm and top of thigh.
5. Puncture the site with the lancing device. Gently squeeze the finger in a downward motion to obtain a large enough drop of blood to cover the test strip 1/8" to 1/4" in diameter).			
6. Place blood onto testing strip and complete instructions according to manufacturer.			
7. Record results in Procedure Log. Refer to Appendix for samples of blood glucose logs.			Refer to " <i>Algorithms for Blood Results</i> " for management of specific blood sugar level (page 2).

Algorithms for Blood Glucose Results

STUDENT'S
PHOTO



Fast Acting Sugar Sources	
• 15 gm. glucose tablets	• ½ c. apple juice
• 15 gm. glucose gel	• ¼ c. grape juice
• 1/3 c. sugared soda	• ½ tube cake mate gel
• ½ c. orange juice	• 3 tsp. sugar (in water)

Student's Name:
School:
School Nurse:
Nurse contact number:
Parent's phone Number:
Alternate ER number:

Standard Procedure for Mild or Moderate Low Blood Glucose
Hypoglycemia/Insulin Reaction

Pupil	DOB	School	Grade
Equipment and Supplies	1. Blood glucose meter kit 2. Fast acting carbohydrates i.e.: apple juice; orange juice 3. Glucose tablets; 4. Glucose gel such as Insta-Glucose, Monogel or Glutose		5. Carb. and protein snack i.e.: prepackaged crackers/cheese or peanut butter, ½ sandwich, 2 graham crackers with ½ cup milk, Nite Bite, etc.
Essential Steps			Key Points & Precautions
1. Observe/recognize signs/symptoms of low blood glucose ; ask pupil to describe how he/she feels . (Pupil's known signs/symptoms are checked below).			
Mild Symptoms		Moderate Symptoms	If Severe Symptoms such as:
<input type="checkbox"/> Head ache <input type="checkbox"/> Moist skin, sweating <input type="checkbox"/> Shakiness <input type="checkbox"/> Pale skin <input type="checkbox"/> Sudden hunger <input type="checkbox"/> Stomach ache		<input type="checkbox"/> Weakness, fatigue <input type="checkbox"/> Numbness of lips/tongue <input type="checkbox"/> Irritability <input type="checkbox"/> Blurred vision <input type="checkbox"/> Crying	<input type="checkbox"/> Droopy eyelids, sleepy <input type="checkbox"/> Erratic behavior <input type="checkbox"/> Slurred speech <input type="checkbox"/> Loss of coordination <input type="checkbox"/> Confusion
2. Test blood (if testing equipment available), record results. If below 70 , do as follows: (a) Treat with one (1) of the following fast acting carbohydrates: <ul style="list-style-type: none"> • 4 oz. (½ cup) apple juice or orange juice (or regular soda pop). • 3 glucose tablets (chewed thoroughly before swallowing). • Glucose gel (i.e.: 15 gm. Insta-Glucose -or- 15 gm. Monogel or Glutose). • ½ tube gel Cakemate (19 Gm, mini-purse size). (b) Observe for 10 minutes, then check for improvement: <ul style="list-style-type: none"> • Pupil states symptoms are gone and appears OK. • Blood glucose over 70 per pupil retest. (c) If no improvement, repeat Step 2, a and b (second attempt) except use the 15 gm. 3 glucose tablets - or – 15 gm. glucose gel product, if available. - and - If still no improvement, repeat again (3rd attempt & if needed, 4th attempt). <ul style="list-style-type: none"> • If no improvement after third attempt, call parent and school nurse. • If no improvement after fourth attempt, call parent and paramedics. (d) When symptoms subside, eat one of the following: <ul style="list-style-type: none"> • Carb. and protein snack if over 1 hour until lunch or snack time, or • Lunch or snack, whichever is due within the hour, AND After eating meal/snack, resume classroom activities if fully recovered, or have health office call parent for assistance if not fully recovered. (e) Document care on Procedure Log, and notify parent			If moderate symptoms, provide immediate adult supervision. Treat “on the spot”; do not send elsewhere - and - If none of the listed fast acting carbohydrates, use 2 tsp. sugar or honey, - or - 4 oz. Milk or fruit punch, etc. If in classroom and retest is needed, request health office assistance. - and - If pupil becomes unable to participate in care, proceed immediately to Emergency Procedure for Severe Blood Glucose.
3. Treat as follows if blood glucose is 71 or above on initial test: (a) If 71 or above and feeling low/not well, repeat test to verify results <ul style="list-style-type: none"> • If 80 or less and still feeling low or not well, treat for Mild or Moderate Low Blood Glucose (Step 2, a- e, above). • If 81 or above and still feeling low or not well, consult with school nurse (b) If 71 to 240 and feeling OK, no treatment indicated (c) If 240 or above, see procedure for High Blood Glucose			School nurse will advise regarding further care.

Standard Emergency Procedure for Severe Low Blood Glucose

Hypoglycemia/Insulin Reaction Glucose Gel Followed by Glucagon Injection

Pupil	DOB	School	Grade
Equipment and Supplies	1. Glucose gel 2. Glucagon kit	3. Regular (not diet) soda pop 4. Blood glucose meter kit	
Essential Steps			Key Points & Precautions
1. Verify signs of severe low blood glucose: Unable to swallow, unconscious, combative, uncooperative, seizures.			Signs are so severe that pupil is unable to participate in care.
2. Place pupil on side - or - in upright position if restless/uncooperative, AND Have someone call paramedics, school nurse, and parent.			If seizure occurs, follow standard seizure procedure.
3. When pupil is able to swallow, give one of the following: • 15 Gms of glucose gel: <input type="checkbox"/> ½ tube Insta-Glucose - or - <input type="checkbox"/> 1 pkt. Monogel or Glutose -and Give sips of regular soda pop (not diet) as tolerated until paramedics arrive. Avoid orange juice. Glucagon may cause nausea/vomiting.			If able to swallow but not fully alert, position head to one side for preventing aspiration.
4. Give Glucagon injection (use procedure below).			
5. When pupil is able to swallow , repeat Step 3, - and - Give Sips of regular soda pop (not diet) as tolerated until paramedics arrive.			Avoid orange juice. Glucagon can cause nausea/vomiting.
6. When paramedics arrive , pupil will be transported for medical care. When transported , notify physician.			
7. Document on Procedure Log.			

How to Prepare and Inject Glucagon

Equipment and Supplies	1. Glucagon Kit (Diluent in syringe and vial of Glucagon powder) 2. Alcohol wipes	3. Band-Aids 4. Sharps Container
Essential Steps		Key Points & Precautions
Prepare Glucagon syringe:		
1. Remove vial cap, clean vial top with alcohol, remove needle cover.		In an emergency, cleaning vial top with alcohol can be eliminated.
2. Inject contents of syringe into vial (held upright).		
3. Swirl vial gently until dissolved/clear.		
4. Hold vial upside down and withdraw all solution.		
5. Withdraw needle from vial, hold syringe upright, and remove air/bubbles from syringe.		
Administer Glucagon:		
1. Expose injection site (upper, outer area of thigh or arm).		
2. Hold syringe safely; use other hand to clean injection site with alcohol.		District policy may require gloves for
3. "Pinch up" skin/muscle (still holding alcohol wipe).		
4. Insert needle straight into muscle of buttocks, arm or thigh and inject glucagon.		
5. Withdraw needle while pressing gently with alcohol wipe or cotton ball at injection site.		
6. Massage injection site for 10 seconds; apply Band-Aid if needed.		
7. Put used syringe and vial in Sharps container.		If Glucagon is prepared and not used, it is only good for one month if kept refrigerated.

Standard Emergency Procedure for Severe Low Blood Glucose
Hypoglycemia/Insulin Reaction
Glucagon Injection Followed By Glucose Gel When Able To Swallow

Pupil	DOB	School	Grade
Equipment and Supplies	1. Glucose gel 2. Glucagon kit	3. Regular (not diet) soda pop 4. Blood glucose meter kit	
Essential Steps			Key Points & Precautions
1. Verify signs of severe low blood glucose: Unable to swallow, unconsciousness, combative, uncooperative, seizures.			Signs are so severe that pupil cannot participate in care.
2. Place pupil on side - or - in upright position if restless/uncooperative, AND Have someone call paramedics, school nurse, and parent.			If seizure occurs, follow standard seizure procedure.
3. Give glucagon injection (use procedure below).			
4. When pupil is able to swallow, give one of the following : • 15 gms. of glucose gel: <input type="checkbox"/> ½ tube Insta-Glucose - or - <input type="checkbox"/> 1 pkt. Monogel or Glutose - and - Give sips of regular soda pop (not diet) as tolerated until paramedics arrive. Avoid orange juice. Glucagon may cause nausea/vomiting.			If able to swallow but not fully alert, position head to one side for preventing aspiration.
5. When paramedics arrive , pupil will be transported for medical care. When transported , notify physician.			
6. Document on Procedure Log.			

How To Prepare And Inject Glucagon

Equipment and Supplies	1. Glucagon Kit (Diluent in syringe and vial of glucagon powder) 2. Alcohol wipes	3. Band-Aids 4. Sharps Container
Essential Steps		Key Points & Precautions
Prepare Glucagon syringe		
1. Remove vial cap, clean vial top with alcohol, remove needle cover.		
2. Inject contents of syringe into vial (held upright).		
3. Withdraw needle; hold syringe safely upright,		
4. Rotate vial gently/vertically (with other hand) until dissolved/clear.		
5. Hold vial upside down, reinsert needle, and withdraw all solution.		
6. Withdraw needle from vial, hold syringe upright.		
7. Remove air/bubbles from syringe -then- create dribble at needle tip.		
Administer Glucagon:		
1. Expose injection site (upper, outer area of thigh or arm).		
2. Hold syringe safely; use other hand to clean injection site with alcohol.		District policy may require gloves for injections
3. "Pinch up" skin/muscle (still holding alcohol wipe).		
4. Insert needle straight into muscle of buttock, arm or thigh and inject glucagon.(straight in) and inject glucagon.		
5. Withdraw needle while pressing gently with alcohol wipe or cotton ball at injection site.		
6. Massage injection site for 10 seconds; apply Band-Aid if needed.		
7. Put used syringe and vial in Sharps container.		If Glucagon is prepared and not used, it is only good for one month if kept refrigerated.

Standard Emergency Procedure for Severe Low Blood Glucose
Hypoglycemia/Insulin Reaction
Glucose Gel Only

Pupil	DOB	School	Grade
Equipment and Supplies	1. Glucose gel 2. Glucagon kit	3. Regular (not diet) soda pop 4. Blood glucose meter kit 5. Gloves (if indicated)	
Essential Steps			Key Points & Precautions
1. Verify signs of severe low blood glucose: Unable to swallow, unconsciousness, combative, uncooperative, seizures.			Signs are so severe that pupil is unable to participate in care.
2. Place pupil on side - or - in upright position if restless/uncooperative, AND Have someone call paramedics, school nurse and parent.			If seizure occurs, follow standard seizure procedure.
3. Place <u>one</u> of the following in cheek pouch closest to ground and massage: • Glucose gel: <input type="checkbox"/> 15 gm. Insta-Glucose - or - <input type="checkbox"/> 15 gm Monogel or Glutose			Maintain head position to one side prevent aspiration
4. When pupil is able to swallow, repeat Step 3, - and - Give sips of regular soda pop (not diet) as tolerated until paramedics arrive.			Avoid orange juice. Glucagon can cause nausea/vomiting.
5. When paramedics arrive , pupil will be transported for medical care. When transported, notify physician.			
6. Document on Procedure Log.			

Standard Procedure for High Blood Glucose Hyperglycemia

Pupil	DOB	School	Grade
Equipment and Supplies	1. Blood glucose meter kit 2. (If Indicated) Ketone test strips/bottle		3. (If Indicated) Clean jar or urine cup 4. (If Indicated) Insulin supplies
Essential Steps			Key Points & Precautions
1. Verify , according to test results, a high blood glucose as follows: <input type="checkbox"/> 240 or above <input type="checkbox"/> 300 or above <input type="checkbox"/> Other (specify) _____			
2. Initiate care as checked below: <ul style="list-style-type: none"> • Give 1 - 2 glasses of water every hour. • Notify parent of blood test results when _____ or above. <input type="checkbox"/> Check ketones (see directions below) if blood sugar is greater than: <input type="checkbox"/> 300 <input type="checkbox"/> Other (Specify) _____ <p>Do NOT participate in PE or other forms of exercise if blood sugar is above _____, or if ketones are present.</p> <input type="checkbox"/> If 60 minutes or less before lunchtime, administer correction dose of Insulin per Doctor's orders. (See Physician Authorization for Diabetes Management, # of SQ units determined by page 3.) <input type="checkbox"/> Other (specify): _____			Pupil must not exercise if Ketones are present. A correction dose of insulin is given at mealtime or bedtime for control of blood sugar above 240 to 300.
3. If pupil is feeling OK , resume classroom activities with parent approval.			
4. If pupil develops nausea/vomiting and/or rapid breathing, call Paramedics, School Nurse and Parent immediately.			
5. Document care on Procedure Log.			

Standard Procedure for Testing Urine Ketones

Essential Steps	Key Points & Precautions
1. Saturate the test strip with urine by one of the following: <input type="checkbox"/> Pupil to hold test strip in urine flow. <input type="checkbox"/> Pupil to urinate in cup/jar, then strip is dipped into urine.	If assisting the pupil, wear disposable gloves during this procedure.
2. Wait for test strip to develop per directions on test strip bottle.	
3. Compare color of strip to chart on bottle ...Results will be read as negative, small, moderate, or large. <ul style="list-style-type: none"> • If results are moderate or large, call parent to take pupil home for observation and/or medical care. 	
4. Record results on Procedure Log.	

Blood Ketone Testing

GENERAL INFORMATION

The purpose of this procedure is to determine the level of blood ketones as designated on physician authorization or when symptoms of hyperglycemia occur (refer to specific procedure).

1. Testing the blood for ketones is considered to be more accurate than urine testing for ketones. Blood ketone testing reflects time accuracy whereas urine ketones reflects a time delay. The monitoring of blood ketone levels can assist in proper management of diabetes
2. Follow specific manufacturer's instructions for operating meter.
3. Follow manufacturer's guidelines for ketone ranges (negative or "normal limits", moderate and large or "at risk for possible ketoacidosis").
4. Parent/careprovider to supply necessary equipment for performing procedures at school.

Standard Procedure for Blood Ketone Testing

Pupil		DOB	School	Grade
EQUIPMENT AND SUPPLIES		<ul style="list-style-type: none"> Alcohol prep pad Finger lancing device (Lancet, Autolet, Penlet, etc) Blood ketone testing meter such as Precision Xtra Blood testing strips for specific electronic meter. Kleenex or cotton balls Gloves Log Book 		
ESSENTIAL STEPS			KEY POINTS AND PRECAUTIONS	
1. Wash hands with soap and water. Put on gloves. Student's hands must be washed as well. This is sufficient for prepping the site, however, alcohol may be used for further prepping. (The site selected must be dry before pricking.)			Alcohol may cause toughening of the skin or burning sensation. If moisture (water or alcohol) remains on the skin it may alter test results	
2. Place ketone testing strip into electronic meter according to manufacturer's instructions.				
3. Cock the spring mechanism in the finger-lancing device				
4. Select a site on the top sides of any fingertip. Hang the arm below the level of the heart for 30 seconds to increase blood flow, and then gently squeeze the fingertip in a "milking" fashion to further increase the blood supply to the site.			The tops of the fingertips may be more sensitive. The sides of the fingers have less blood flow. Note: Other sites can be used such as the forearm or tops of the thighs. A lancing device that is specially designed for these areas must be used.	
5. Puncture the site with the lancing device. Gently squeeze the finger in a downward motion to obtain a large enough drop of blood to cover the test strip 1/8" to 1/4" in diameter).				
6. Place blood onto testing strip and complete instructions according to manufacturer.				
7. If results are small, notify school nurse and parent. If results are moderate or large, call parent to take pupil home for close observation and/or medical care; notify school nurse.				
8. Record results in Diabetes Monitoring log.			Refer to standard procedure for hyperglycemia for specific treatment.	

Insulin Administration

<p>General Information</p>	<p>A. Insulin is a hormone constructed of proteins that is normally produced by the pancreas. Synthetically manufactured insulin is produced for diabetics who lack this hormone. Several days without insulin can cause a life-threatening condition of keto-acidosis, coma and eventually death.</p> <p>B. The number of insulin units to be given is ordered by the physician or nurse practitioner. The amount or dose of insulin will depend on several factors: body size, blood glucose levels, meal plan, and exercise. A sliding scale may be used i.e. the number of insulin units to be given is based on the blood glucose reading (refer to procedure for Blood Glucose Testing).</p> <p>C. Insulin can be affected by extremes in temperature, which can denature the protein and decrease or eliminate its effect. Insulin remains stable at temperatures between 40 - 75 degrees. Once insulin is opened, the date should be written on the vial. Opened insulin should be stored in the refrigerator and used for 1 month. Extra vials should be stored in the refrigerator to assure temperature consistency. Unopened vials that are stored properly are good until the expiration date. Refer to manufacturer's instructions to ensure proper storage.</p> <p>D. Insulin doses are measured in "units". There are 10 milliliters in one vial of insulin, which is equivalent to 1000 units. One unit of insulin can alter a blood glucose level therefore it is imperative that the ordered dosage be EXACT!</p> <p>E. Insulin injections are given subcutaneously (area between the skin and the muscle). Sites should be rotated to avoid scar tissue or fatty cell growth under the skin.</p> <p>F. School staff members (teachers, recess monitors, health aides, ancillary staff, bus drivers, substitutes, etc) who are responsible for the student with diabetes need to be educated regarding hypo/hyperglycemia standard procedure. Hypoglycemia is most likely to occur at insulin peak action times (refer to "Insulin Action Times", attachment).</p> <p>G. Regular or Humalog are short acting insulins and are used for meal coverage or "spot dosing" and correction doses (doses given in order to decrease an elevated blood glucose). If an extra dose of short acting insulin is given, the blood glucose should always be checked approximately 30 minutes later.</p> <p>H. Insulin delivery methods include a syringe, an insulin pen, an insulin pump, or several tools that can be used to assist with injection and/or delivery. Separate procedures have been written for the administration by syringe, insulin pen and pump.</p> <p>I. The school nurse must be notified if additional medication is being used by the student. Other medications and drugs can increase or decrease the effect of insulin. Insulin drug interactions can include:</p> <ul style="list-style-type: none"> • Metoprolol, propranolol; hyperglycemia or hypoglycemia may occur. Use together cautiously. • Alcohol, corticosteroids, dextrothyroxine, estrogens, glucagon, rifampin, thiazide diuretics, thyroxine; decrease insulin response. Monitor blood glucose. • Anabolic steroids, clofibrate, guanethidine, alofenate, MAO inhibitors, phenylbutazone salicyates, mulfonamides, oral anticoagulants; increase insulin response. Monitor blood glucose. <p>In the event of a disaster, if a credentialed school nurse is not available, the administration of insulin by others would be considered prudent and permissible by law. It is strongly recommended that the parents/care providers discuss their individual situation with school personnel so that guidelines and precautions can be addressed in advance (refer to guidelines for Diabetes Care at School During a Disaster). This procedure can be copied and placed in a baggie with the insulin supply for use during a disaster.</p>
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Standard Procedure for Insulin Administration by Injection

Pupil	DOB	School	Grade
Equipment And Supplies	1. Vials of insulin (extra 3-day supply for disaster preparedness) 2. Syringes with needles. 3. Cotton balls	4. Alcohol swabs 5. Sharps container (each school should have its own Sharps container)	
Essential Steps		Key Points & Precautions	
1. Wash hands.		Implement Universal Precautions at all times.	
2. Assemble insulin(s), syringe, cotton ball, and alcohol.			
3. If insulin is cold, warm in the palm of hand to room temperature.		Injecting cold insulin can cause pain and may affect absorption.	
4. If this is a new bottle of insulin, remove the flat, colored cap. Do not remove the rubber stopper or the metal band under the cap.			
5. NPH or Lente will require mixing. Gently roll the bottle between the palms or turn the bottle over from end to end a few times. Do not shake. If any clumps are visible do not use.		Shaking can cause the protein to denature and decrease the potency. Clumps are an indication that the protein has been denatured.	
6. Clean the rubber tops with alcohol and let dry for a few seconds.			
7. Remove the cap from the syringe and place in a "clean field." (If only Humalog or regular insulin is used then proceed to #8 and Skip #9). Fill the syringe with air equal to the number of units of NPH insulin needed. Keep the bottle upright and inject air into the NPH or Lente bottle. Pull empty syringe out of the bottle.		Air is always injected into the longer acting insulin first. Air is always injected to prevent creating a vacuum	
8. Inject air into regular or Humalog insulin bottle and with syringe remaining in bottle, invert and pull plunger back beyond the number of units desired. Keeping the syringe in an upright-position, clear any air by pulling plunger back and tapping syringe to raise air bubbles to the top. Push plunger to desired amount of units, ensuring that no air bubbles remain and withdraw the syringe.		Regular/Humalog Insulinis always dran up first. This avoids potential contamination of long acting insulin into short acting (which could delay the action time of regular insulin). Air bubbles in the syringe can alter the desired dose.	
9. Inject needle into NPH or Lente bottle and withdraw exact number of NPH/Lente units to be given. Total number of units must equal the Regular unit dose plus the NPH/Lente dose.		Example: 5u Regular, <u>10u</u> NPH equals 15 total units If there is any air in the syringe after withdrawing the needle, attempt to clear. If any insulin is inadvertently pushed out, the entire dose should be discarded and redrawn. Avoid pushing the plunger up in the NPH/Lente bottle to rid air. This could inadvertently push regular plunger up into the NPH/Lente bottle and alter the entire dose.	
10. Prop syringe on the cap in a "clean field" Select the site to be used and prep with alcohol and let dry. If area is dirty, then wash with soap and water and dry.		Any subcutaneous tissue can be used for injection sites. The best absorption is in the lower abdomen, followed by the upper, outer arms, tops of the thighs and lastly the upper areas of the buttocks. Exercise and heat (like the warmth from a Jacuzzi) also hastens absorption of an injected area.	
11. Pinch up skin and tissue with one hand. With the other hand, hold the syringe, with the eye of the needle pointing upward, like a pencil. Dart the needle into the "soft pocket" (area that lies directly in front or in back of). the pinched up skin) at a 45 degree angle. Inject insulin in one to five seconds. Release pinched up skin and remove needle while applying gentle pressure at the injection site for 10- 15 seconds.		A greater amount of fatty tissue may require a 90 degree angle. Take care to avoid injecting into the muscle, as it will hastens absorption This will help to prevent leakage from the site. Do not massage the area as it irritates the tissue and hastens absorption.	
12. Dispose of syringe with needle intact into a sharps container.			
13. Document on a Procedure log.			

Insulin Pen Delivery Systems

<p>General Information</p>	<p>An insulin pen is an insulin delivery system that has the visual appearance of a writing pen; it consists of a cartridge holder (insulin must be purchased in prescribed cartridges), a piston rod (this is a screw mechanism that adjusts the desired dose), a dose indicator window (dose is indicated by visual numbers), a push button (this delivers the insulin), and a pen encasement.</p> <p>The purpose of Insulin Pen Delivery System in School is to provide insulin with a convenient and accurate device at school. Insulin pens will assist in preventing dose errors that may occur with a syringe and vial.</p> <p>Some pens can be purchased with the insulin cartridge already in place (these are considered “disposable pens”) and other pens require “loading” of a specific insulin cartridge.</p> <p>Storage of cartridges may or may not require refrigeration. Specific manufacturer’s instructions regarding handling and storage of insulin cartridges must be followed.</p> <p>There are multiple companies that manufacture insulin pens. A specific brand of insulin cartridge is prescribed by the student’s physician. Specific manufacturer’s instructions must be followed. The following companies currently manufacture insulin pens:</p> <ul style="list-style-type: none"> A. B-D Pen: For use with all brands of 150-ml insulin cartridges; delivers 1 to 30 units in 1-unit increments; works with B-D Ultra-Fine Original (29G x 1/2”) or B-D Ultra-Fine III (31G x 5/16”) pen needles. B. B-D Pen Mini: Same as above with the exception that dosage increments are delivered in 0.5 to 15 units in 1/2 unit increments. C. Disetronic Pen: “Open system” allows use on any type, manufacturer, and mixture of insulin. Uses disposable 315 unit (3.15 ml) plastic cartridges. Delivers insulin in 1-unit increments from 1 to 80 units per injection using standard 30G needles. D. Humalog Pen: Pre-filled, disposable insulin delivery device that holds 3.0 ml (300 units) of rapid acting insulin. No refrigeration needed after the first use. Humulin Pen: Same as Humalog Pen but contains insulin with different duration of action times. E. NovoPen 1.5: Delivers insulin in 1-unit increments up to 40 units; designed for use with Novolin PenFill 1.5 ml cartridge and NovoFine 30 disposable needle. F. Autopen AN 3100: Has a release button extension that aids in the automatic delivery of insulin from any 1.5 ml glass insulin cartridge. This model delivers insulin in 1-unit increments.
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Standard Procedure for Insulin Pen Delivery Systems

Pupil	DOB	School	Grade
Equipment And Supplies	1. Insulin pen 2. Insulin cartridge 3. Pen needles	4. Cotton balls 5. Alcohol/swabs 6. Sharps container	
Essential Steps		Key Points & Precautions	
1. Always obtain a blood glucose reading prior to insulin administration.		This will help determine amount of insulin to be given.	
2. Determine insulin dose with physician's orders.		This will be either a standard noon dose, based on the blood glucose reading or a "correction dose" (spot dose) of insulin for hyperglycemia.	
3. Assemble insulin pen, pen needle and alcohol.			
4. Check insulin type/brand. This must match physician's orders.			
5. Check the level of insulin remaining in the insulin cartridge.		Cartridges are made for multiple doses. Ensure that enough insulin remains in the cartridge for accurate dosing.	
6. Attach new needle. Remove outer plastic cap and plastic needle cap. Place outer needle cap on a flat surface with open end facing up.		This will assist in needle disposal after insulin is given.	
7. Dial in two units of insulin to perform an "air shot." Insulin should appear at needle tip. If it does not, repeat procedure.		Change in temperatures can cause air intake. This procedure ensures that any accumulated air will be released, thereby ensuring accurate insulin dosage.	
8. Dial in prescribed dose.			
9. Cleanse skin with alcohol and allow to dry, before injecting.			
10. Pinch up the skin at selected area and dart the needle into the soft pocket at a 90 degree angle.		The soft pocket lies directly in front of or in back of the pinched up skin.	
11. Inject insulin at a steady rate.			
12. Count slowly to three and then remove the needle.			
13. Grasping the pen, place the needle into plastic needle cap that was left upright on a flat surface. Unscrew the needle tip and carefully discard into a sharps container.		Do not lift the cap up with fingers to cover needle tip. Leave cap on the counter and use the pen to place the needle into the cap to avoid possibility of finger stick injury. The needle must be changed after each injection, as leaving the pen needle attached leaves an OPEN passageway into the insulin and contamination may occur.	
14. Document on Procedure Log.			

Insulin Pump Therapy

<p>General Information</p>	<p>A. Insulin Pump Therapy is also referred to as Continuous Subcutaneous Insulin Infusion (CSII). The pump is worn outside the body and is about the size and weight of a pager. It holds a reservoir of insulin inside the pump and is programmed to deliver the insulin through a thin plastic tube called an infusion set. The infusion set is inserted via a needle that is covered by a cannula just below the skin. Once inserted, the needle is removed and the cannula stays in place for two to three days. When it is time to change the infusion set, a new infusion set is inserted into a different site.</p> <p>B. The goal of Insulin Pump Therapy is to achieve near normal blood glucose levels over 24 hours per day. The use of CSII has been shown to improve growth in children, decrease the incidence of hypoglycemia, and decrease the incidence of long term diabetes complications.</p> <p style="padding-left: 40px;">The role of the school in supporting Insulin Pump Therapy is to promote the student's independent management of their diabetes via insulin pump use and to achieve tight control of the diabetes with minimal episodes of hypo/hyperglycemia.</p> <p>C. The advantages of CSII are that it affords more flexibility of life-style with less variability of insulin absorption, more precise insulin administration matched with food intake and activity levels, and overall close attention to diabetes management.</p> <p>D. The pump uses a short acting insulin as opposed to conventional injections which use short and long-acting insulin.</p> <p>E. Insulin Pump Therapy combines a continuous basal/rate of insulin for 24 hours and a bolus dose for meal or snack times and times of high blood glucose.</p> <ol style="list-style-type: none"> 1) Basal rate: amount of insulin required when no food is eaten; a pre-programmed feature measured in units per hour (U/H); can be altered based on the pumper's daily needs; can be temporarily changed for alteration in schedule, activity, illness or food 2) Bolus: when the pump is programmed to give a dose of insulin for meals, snacks and/or for correction of elevated blood glucose. <p>F. The specific pump manufacturer instructions must be followed. Manuals, booklets, and videos are usually available free of charge by calling the number listed on the back of the pump</p> <p>G. If the supply of insulin is interrupted due to mechanical pump failure, dislodgment of the cannula, accidental severing of the tubing, or clogged or obstructed tubing, the blood glucose level can rise rapidly. In case one of these incidents should occur, it is necessary for extra supplies to be kept at school to prevent or limit the subsequent hyperglycemia and possible ketacidosis (can occur in as little as 3 hours).</p> <p>H. The pump can be disconnected using a quick release set. This is usually done during water activities or contact sports.</p> <p>I. A 3x5 card with the student's name, pump model and serial number, and the pump manufacturer's help line phone number should be readily available in the health office for any problems that might occur.</p> <p>J. A wallet sized programming card and an alarm card or manufacturer's instructions should be available in the health office for reference.</p>
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Insulin Pump Therapy For Students Independent Performance

A. The school nurse needs to ensure that the following actions will occur:

1. The student will be responsible for proper needle/catheter site preparation and insertion.
2. The student will be responsible for programming the pump functions.
3. The student agrees to immediately report to designated school personnel any pump malfunctions (dead batteries, high-pressure alarm/no delivery, etc.) and to request assistance when needed.
4. The student will be responsible for delivering the appropriate insulin amount based on blood glucose testing values, anticipated exercise and planned food consumption.
5. The student/parent will take responsibility for taking care of any skin site problems (bleeding, tenderness, itching, oozing, etc.). If the tubing becomes dislodged at school the student will report immediately to the school office and insert a new set.
6. Universal precautions will be used by the student when discarding infusion sets, and needles. Needles will be placed in a sharps container. Infusion sets can be placed in a Zip-Loc baggie and discarded in a lined wastebasket.
7. Student will be responsible for notifying parent(s)/care provider of any pump incidents.
8. The student will be responsible for ensuring pump/tubing safety during physical activities. If the student chooses to use a quick-release set during activities, he/she will ensure that euglycemia is maintained as much as possible (checking blood glucose before, during and after activities and taking extra carbohydrates as needed).
9. School nurse will ensure that the student maintains safety and health while at school.

School nurse will do general staff training for recognition of signs and symptoms of hyper and hypoglycemia for providing assistance to students if needed.

Parent Responsibilities	Student Responsibilities
<ol style="list-style-type: none"> 1. Checking site, ensuring tubing patency and checking insulin reservoir prior to student attending school each day. 2. Programming pump functions that include basal rate, alternate basal rates, square wave boluses, and/ or temporary basal rates. 3. Reinserting a new infusion set if any skin site problems (bleeding, tenderness, itching, oozing, etc.) occur and abide by universal precautions when discarding infusion sets, and needles at school (needles will be placed in a sharps container; infusion sets can be placed in a Zip-Loc baggie and discarded in a lined wastebasket). 4. Be accessible at all times via cell phone or pager for potential pump alarms, cannula reinsertion or clogging, and/or accidental severing of the tubing 5. Calculate the number of carbohydrates the child will be receiving for snack and/or school lunch (school food services director can provide menu breakdowns) or pre-packed lunch. This will be written down on the School-Home Diabetes Monitoring Log for Insulin Pump (see attached) and sent daily to the school nurse. 	<ol style="list-style-type: none"> 1. Report to appropriate school personnel any pump incidents such as low battery alarm, no delivery alarm, accidental severing or dislodgment of tubing.

Insulin Pump Therapy
Student Independent Performance
Standard Procedure for Hyperglycemia with Pump Therapy

Pupil	DOB	School	Grade
Equipment and Supplies	1. Infusion set and reservoir 2. Tape to secure infusion set (Tegaderm, Polyskin, Op-Site, etc.) 3. Items needed to prep skin site (alcohol swabs, betadine, etc) 4. Extra batteries		5. Sof-serter 6. Pump programming and alarm card Extra supplies in case of pump malfunction 7. Insulin, and syringe
Essential Steps		Key Points & Precautions	
1. Check site for leakage, cannula dislodgement, redness and/or tenderness. If any of these are present, have student change the site immediately.		Student must assemble equipment, prime tubing, prep the insertion site, and insert the infusion set using clean technique. The cannula can be inserted using a Sof-serter tool. This minimizes the chances of improper insertion. Some pump wearers use an infusion set (Silhouette or Tender Twos) that is inserted at an angle with a longer cannula. This is used for those who have less body fat. The Sof-serter cannot be used with these sets. Student to dispose of the insertion needle in a sharps container.	
2. Follow standard procedure for hyperglycemia		Student may need assistance.	
3. Student must check blood glucose 30 minutes after inserting a new infusion set and/or any correction bolus to ensure that blood glucose is responding to insulin.		It may be necessary to continue checking blood glucose levels periodically to prevent potential hypoglycemia.	

Standard Procedure for Hypoglycemia with Pump Therapy

Essential Steps	Key Points & Precautions
1. Follow standard procedure for Low Blood Glucose. The student should be knowledgeable regarding what actions to take during exercise.	Student may need assistance. General staff training is necessary for recognition of signs and symptoms and obtaining assistance for student. The student should be knowledgeable regarding what actions to take during exercise. The pump can be programmed to “suspend” function during exercise so hypoglycemia can be avoided or extra carbohydrates can be consumed for every 30 minutes of exercise.
2. If problems continue call notify the school nurse.	School nurse will notify parents and confer with physician.

Standard Procedure for Pump Malfunction

Essential Steps	Key Points & Precautions
1. Trouble shoot alarms.	Follow manufacturer’s instructions for alarm Indication. Student must be knowledgeable regarding pump alarms. A reference card can assist with troubleshooting steps or the manufacturer’s 800 number can be called (listed on the back of the pump).
a. LOW BATTERY:	Student to insert new batteries according to instructions.
b. NO DELIVERY	Check reservoir; student to refill if it is empty. Cannula may be obstructed or kinked; student must insert new infusion set.
2. If student is unable to restart pump function, parent and school nurse must be notified immediately.	An injection of short acting insulin maybe ordered.
3. Parent/care provider may choose to take student home for further monitoring. If student remains in school, the school nurse will contact the healthcare provider for further instructions.	
4. Follow Standard Procedure for Hyperglycemia.	
5. Document any incidents on procedure log.	

Insulin Pump Therapy
Student Requiring Supervision
Standard Procedure for Hyperglycemia with Pump Therapy

Pupil	DOB	School	Grade
Equipment and Supplies	1. Infusion set and reservoir 2. Tape to secure infusion set (Tegaderm, Polyskin, Op-Site, etc.) 3. Items needed to prep skin site (alcohol swabs, betadine, etc) 4. Extra batteries		5. Sof-serter 6. Pump programming and alarm card Extra supplies in case of pump incident: 7. Insulin, and syringe
Essential Steps		Key Points & Precautions	
1. Check site for leakage, cannula dislodgement, redness, and/or tenderness. If any of these are present, call parents to change the infusion set immediately.		Redness and/or tenderness at the site may indicate obstruction.	
2. Check blood glucose. Parents will need to bolus a correction factor based on the blood glucose.		Blood glucose must be checked 30 minutes after a correction dose to ensure that the blood glucose is responding to insulin. It may be necessary to continue checking blood glucose levels periodically to prevent potential hypoglycemia.	

Standard Procedure for Hypoglycemia with Pump Therapy

1. Follow Standard Procedure for Hypoglycemia.	Hypoglycemia cannot always be avoided although the parent/care provider should be knowledgeable regarding actions to prevent hypoglycemia during planned exercise. If vigorous exercise is anticipated the parent may pre-program pump function to “suspend” or temporarily decrease to avoid hypoglycemia. Another alternative is for the child to consume extra carbohydrates before, during, and/or after exercise. Accommodations must be addressed in the ISHP.
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Standard Procedure for Pump Alarms

Essential Steps	Key Points & Precautions
1. Trouble shoot alarms:	Follow manufacturer’s instructions for alarm indication. A reference card can assist with troubleshooting steps or call the manufacturers 800 number (listed on the back of the pump).
a. LOW BATTERY	Insert new batteries according to instructions.
b. NO DELIVERY	Check insulin reservoir; if it is empty call parents to refill. Cannula may be obstructed or kinked; call parents for insertion of new infusion set.
2. If unable to troubleshoot pump call school nurse so student can be monitored closely and receive appropriate medical care	School nurse will notify parents and contact the physician for further orders. An injection of short acting insulin maybe ordered.
3. Follow standard procedure for hyperglycemia.	
4. Document any incidents on procedure log.	Keep parents informed of any issues at school.

Diabetes Monitoring Log

STUDENT'S NAME: _____ **BIRTHDATE:** _____ **GRADE:** _____

PARENT: _____ **PHONE:** _____ **SCHOOL NURSE:** _____ **PHONE:** _____

Date	Time	Blood Glucose	Ketones (neg., S, M, L)	Insulin Dose	Comments: (note any unusual circumstances e.g. extra food intake, hypoglycemic rx, exercise, changes in routine, etc.)	Initials

Signature of Staff Providing Care	Initials	Signature of Staff Providing Care	Initials	Signature of Staff Providing Care	Initials

Diabetes Monitoring Log for Insulin Pump

STUDENT'S NAME: _____ **BIRTHDATE:** _____ **GRADE:** _____

PARENT: _____ **PHONE:** _____ **SCHOOL NURSE:** _____ **PHONE:** _____

Date	Carbs		Time	Blood Glucose	Keytones (neg., S, M, L)	Total Insulin Bolus	Comments(note any unusual circumstances)	Initials
	Snack	Lunch						

Signature of Staff Providing Care	Initials	Signature of Staff Providing Care	Initials	Signature of Staff Providing Care	Initials

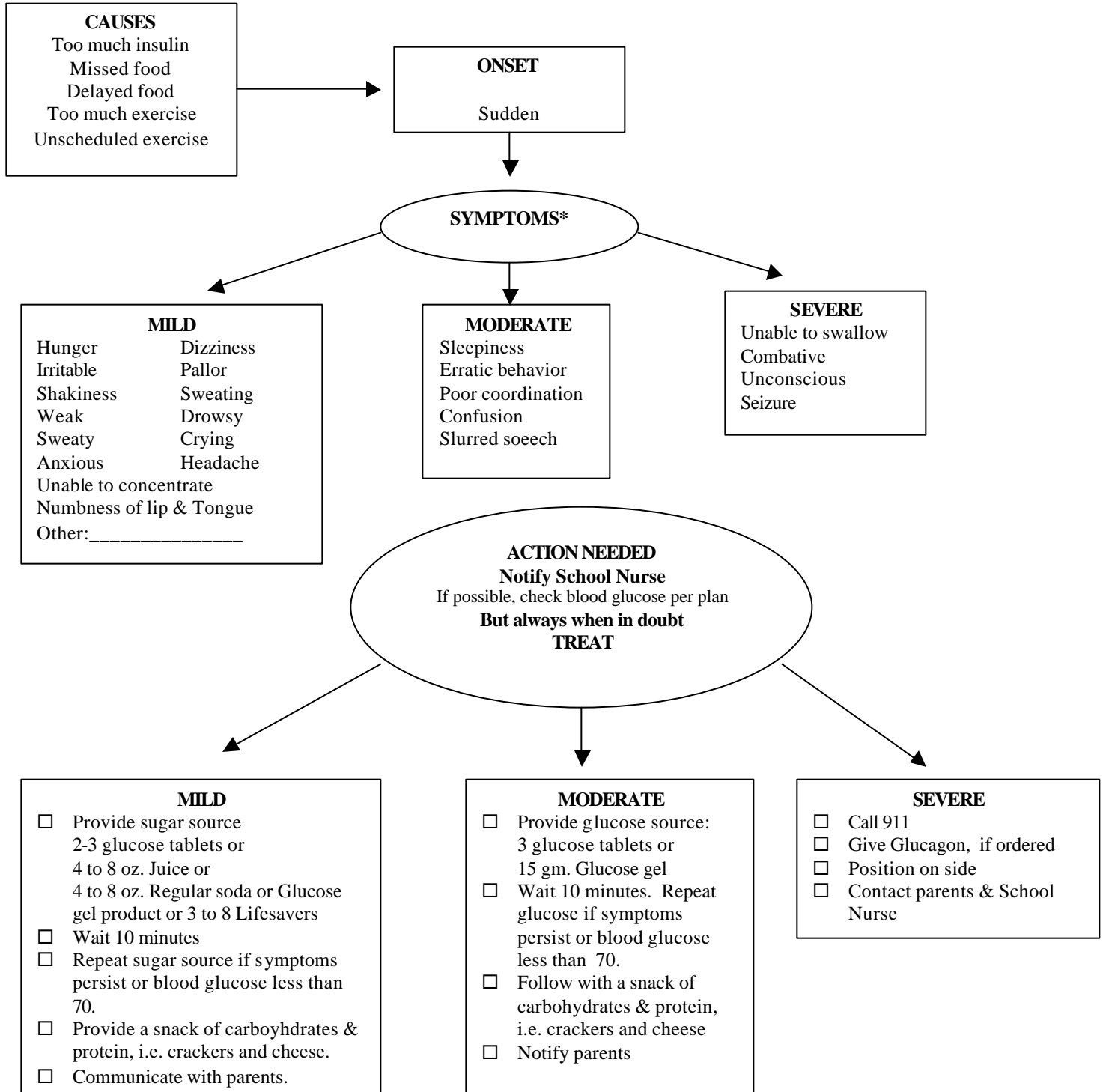
LOW BLOOD GLUCOSE TREATMENT FOR SCHOOL

NAME: _____

GRADE/TEACHER: _____

DATE: _____

PICTURE



School Name: _____

***Never send a child with suspected low blood glucose anywhere alone**

Nurse Contract Number: _____

Adapted from "Washington State Task Force for Students with Diabetes" Manual, 1999

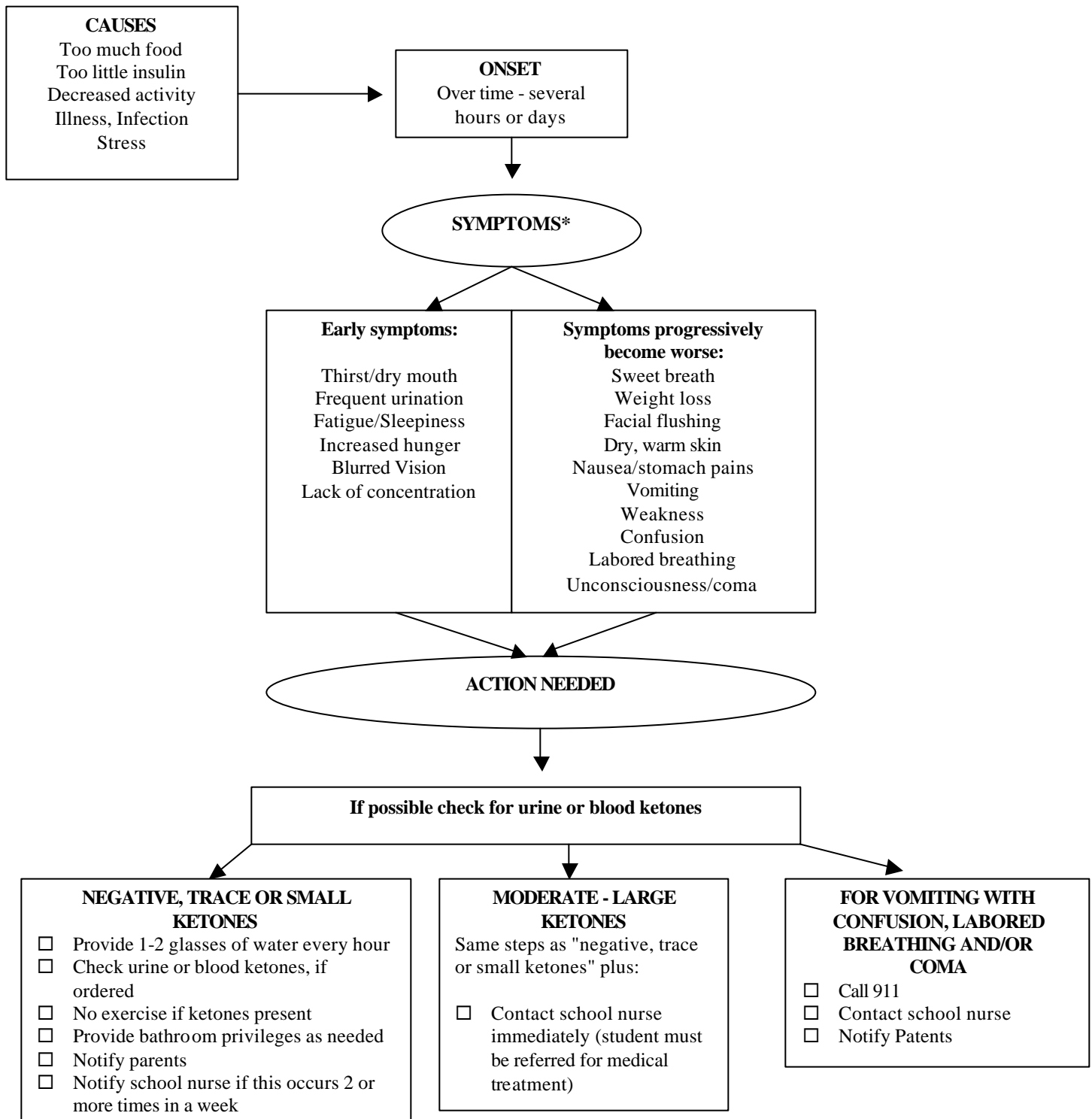
HIGH BLOOD GLUCOSE TREATMENT FOR SCHOOL

NAME: _____

GRADE/TEACHER: _____

DATE: _____

PICTURE



Adapted from Manual developed by "Washington State Task Force for Students with Diabetes"

School Name: _____

Nurse Contract Number: _____